

## **REMARKS**

### **I. Status of Claims**

Claims 1, 4-8, 10, 14, 15, 19, 21 and 24-40 are pending in this application. Claims 2, 3, 9, 11-13, 16-18, 20, 22, and 23 were previously canceled. Claims 1, 8, 10, and 19 are independent. Claims 1, 14, 24, 25, 28, and 29 are currently amended and claims 33-40 are newly added. The Applicant believes that no new matter is added.

Claims 1, 4-8, 10, 14-15, 24-32, are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over George, Jr. (USP 6,651,433) (“George”) in view of Spinnler (USP 6,579,080) (“Spinnler”).

Claims 19 and 21 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over George in view of Spinnler and Higashiyama (USP 7,076,963) (“Higashiyama”).

Claims 24-25, 28-29, and 32 stand rejected under 35 U.S.C. § 112, second paragraph, for being dependent upon a canceled claim.

The Applicants respectfully request reconsideration of these rejections in view of the foregoing amendments and the following remarks.

### **II. 35 U.S.C. § 112, second paragraph, Rejections**

In view of the foregoing amendments, the Applicant respectfully requests withdrawal of these rejections.

### **III. Pending Claims**

Independent claims 1, 8, and 10 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over George, Jr. (USP 6,651,433) in view of Spinnler (USP 6,579,080).

Independent claim 19 is rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over George in view of Spinnler and Higashiyama.

The Applicant respectfully submits that the Office Action’s conclusion of obviousness is based on improper hindsight reasoning, thus the rejections should be withdrawn and the claims allowed. For example, on page 2 of the Office Action, it is recognized that “George, Jr., does not disclose the compressor and expander are scroll type with common orbital scroll.” However, the Office Action alleges on page 2 of the Office Action that “Spinnler is relied upon to disclose it’s well known to have both scroll compressor having chamber 11a and a scroll expander having

chamber 11b with the same orbital scroll formed by a disk 2 with spiral scroll 3a, 3b. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to use the scroll compressor/expander of Spinnler in place of the compressor/expander of George, Jr. for the purpose of achieving a compact structure and because the compressors/expanders are functionally equivalent.”

The Office Action thus indicates that the purported “reason(s)” for combining the references in the manner as proposed appears to be “for the purpose of achieving a compact structure” and “Official Notice (since no reference is applied) for alleging that the components are functionally equivalent.”

The Applicant respectfully submits that neither George, Spinnler, nor any of the other cited references support the position that one of ordinary skill would have modified George as alleged for the benefit of achieving a compact structure. Further, it is respectfully submitted that the Office Action is using hindsight to pick features of references without providing any reason in the prior art itself for making the alleged combination. See KSR Int’l Co. v. Teleflex, Inc., 127 S. Ct. 1727 (2007). It is not proper under 35 U.S.C. § 103 to use Applicant’s invention as a blueprint to pick and choose unrelated features of unrelated references to reproduce, in hindsight, Applicant’s invention.

Also, with respect to Official Notice, the Applicant respectfully traverses the Official Notice taken and requests evidence to substantiate the alleged motivations or reasons to modify George. More specifically, the Applicant respectfully requests evidence to substantiate the theory that one skilled in the art would consider the components of George and Spinnler “functional equivalents.” It is respectfully submitted that such support is required under MPEP 2144.02 and 2144.03.

Moreover, the Applicant respectfully submits that a person of ordinary skill in the art would not attempt to rearrange the compressor 11 and expander 12 of George so that they share a common orbital partition wall because doing so would be significantly change the principle of operation of George. See MPEP § 2143.01 “If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious.”

Further, the dependent claims further distinguish certain embodiments of the present invention from the cited references. For example, claim 33 recites, *inter alia*, “...wherein the

orbital partitioning wall and the compressor case are made of high-heat conductive material, and the expander case is made of a heat-resistant material...,” claim 34, recites *inter alia*, “...wherein an aluminum alloy is used as the high heat-conductive material, and an iron alloy is used as the heat-resistant material...,” and claim 35 recites, *inter alia*, “...wherein the scroll expander includes an expander case and the heating device has an orbital partitioning wall.”

Therefore, for at least the foregoing reasons, the Applicant respectfully submits that claims 1, 8, 10, and 19, as well as their dependent claims, are patentable over the cited references.

#### **IV. Conclusion**

In view of the foregoing discussion, the Applicant respectfully submits that the present application is in all aspects in allowable condition. Favorable reconsideration and early issuance of a Notice of Allowance are therefore respectfully requested.

The Examiner is invited to contact the undersigned at (202) 220-4420 to discuss any matter concerning this application. The Office is authorized to charge any fees related to this communication to Deposit Account No. 11-0600.

Respectfully submitted,

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